REMARKS

Claims 1-3, 5-9, 11-14, 16 and 17 are pending. Claims 1, 5, 11 and 16 have been amended.

Rejection under 35 U.S.C. § 112

Claims 5, 11 and 16 have been amended to correct the improper dependencies noted on page 2 of the Office Action. Also, claim 1 has been amended to correct a minor antecedent basis issue with respect to the term "database store." The applicants submit that the amended claims comply with Section 112. Reconsideration of the rejection is respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 1-3, 5-9, 11-14 and 16-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,721,727 (Chau) "in view of the applicant admitted prior art [AAPA] (Applicants background paras 3-21) or "XML and ASP.NET," and in view of "Introduction to XML Schema" or "Describing your Data: DTDs and XML Schemas." Reconsideration is respectfully requested.

Claim 1 of the present application recites a combination of features that are neither disclosed nor suggested by the cited references. The applicants wish to highlight those features before addressing the present rejection.

First, the claim recites that the method involves "*a user defined type [that] is defined by a class in managed code* and comprises a plurality of fields, each field having a respective data type."

Second, the claim requires that a another, different class be defined as an XML data type.

> defining *another class* in managed code that represents an XML data type;

Next, the claim requires that ***one field*** of the user-defined type be defined as having the XML data type that is defined by the ***other class***.

> defining at least one of the plurality of fields of the user defined type as having the XML data type …

Next, the claim requires that the ***one field*** of the user-defined type that is defined as having the XML data type be associated with an XML Schema that defines a content model ***for the XML data in that one field.***

> and associating said at least one field of the instance of the user defined type with an XML Schema that defines a content model for the XML data in the field,

Next, the claim requires that other fields of the user-defined type be defined as having data types other than XML.

> and defining at least one other of said plurality of fields as having a different data type;

Finally, the claim requires that the class defining the user-defined type be instantiated and stored (persisted) within the database store.

> instantiating the class defining the user defined type to create an object of the user defined type, wherein the object holds XML data in said at least one field and holds data of said different data type in said at least one other field; and
>
> persisting the object within the database store.

Claims 7 and 12 recite substantially the same features. This combination of features is neither taught nor suggested by the cited art of record.

In particular, the cited art does not teach or suggest that an "XML Schema" be associated with **one field** of a plurality of fields of a user defined type, where that **one field** has been defined as having an XML data type, as recited in claims 1, 7 and 12. It is unclear exactly how the cited art is being applied, but the Office Action appears to suggest that because the "Introduction to XML Schema" and "Describing your Data" references teach that an XML Schema is "a replacement for DTDs," those references somehow teach the recited features. However, they do not.

The "DAD" described in Chau is a "Document Access Definition" that is used to define how an XML document is to be stored to or created from the columns of one or more relational database tables. Chau, col. 7, ll. 49-51. As Chau further explains, "[t]he DAD itself *is an XML formatted document*." Col. 7, ln. 52 (emphasis added). Even if the DAD were replaced by an XML Schema, as the references are asserted to teach, there still is nothing in

Chau nor any of the other cited references that teaches or suggests that an "XML Schema" be associated with **one field** of a plurality of fields of a user defined type, where that **one field** is defined to hold XML data, as recited in claims 1, 7 and 12. Where is there an association between the DAD or XML Schema and just **one of a plurality** of fields of a user defined type? The applicants respectfully submit that there is no such teaching or suggestion in Chau nor any of the other cited art. For this reason, the applicants respectfully submit that claims 1, 7 and 12, as amended, patentably define over Chau and any other cited art of record.

Moreover, claim 5 further recites, "wherein said associating step comprises ***annotating the managed code class definition*** of the user defined type with an attribute that identifies the XML Schema on a server that hosts the database store" (emphasis added); claims 11 and 16 recite the same feature. Thus, these claims require that the association be in the form of an "annotation" within "***the managed code class definition*** of the user defined type." The Office Action asserts that "Col 40-49 [of Chau] teaches the DTDID and that this attribute must be specified, hence *it* is annotated, to provide the XML User Defined Type ..." (emphasis added). But the claim requires that the "managed code class definition of the user defined type" be annotated to associate the **one field** of a user-defined type with the XML Schema, not to "provide [a] XML User Defined Type" as asserted in the Office Action. Indeed, when the Office Action states that "*it* is annotated," what is "*it*"?

Furthermore, Chau does not disclose defining user defined types with managed code classes (as admitted in prior Office Actions). Consequently, how can Chau disclose providing any annotation within "***the managed code class definition*** of [a] user defined type"? Again, the applicants respectfully submit that Chau does **not** teach or suggest these additional features of claims 5, 11 and 16.

Finally, claims 2, 8 and 13 each generally recites "wherein ***the managed code class*** that represents the XML data type ***comprises*** at least one constructor ***and*** at least one method that returns an object through which the XML data in said at least one field of the persisted object of the user defined type can be retrieved." Thus, the claim requires that a "managed code class" that defines the XML data type comprise *both* a constructor and a "method that returns an object through which the XML data in said ... persisted object of the user defined type can be retrieved." The Office Action points to Chau, column 8, lines 36-41 as disclosing the claimed features. But the applicants respectfully submit that this portion of Chau does not

disclose all three requirements: (1) a "managed code class", (2) a "constructor" that is part of the managed code class, and (3) a "method [that is part of the managed code class and] that returns an object through which the XML data" in a persisted object of a user-defined type can be retrieved. The Office Action further cites to "AAPA, para 19 and XML and ASP.NET," but there is no explanation as to how those references are being applied, if at all. Reconsideration is respectfully requested.

For the foregoing reasons, the applicants respectfully submit that claims 1, 2, 5, 7, 8, 11, 12, 13 and 16 patentably define over Chau and any other cited art of record, alone or in combination. Inasmuch as the remaining claims depend from one of these claims, the applicants submit that they too patentably define over the cited art for the same reasons. Thus, reconsideration of the Section 103 rejection of claims 1-3, 5-9, 11-14, 16 and 17 is respectfully requested.

CONCLUSION

For all the foregoing reasons, the applicants respectfully submit that the present application is now in condition for allowance.

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